多年生落花生作為綠肥利用之研究

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摘　要：為提高多年花生之利用效益，台灣大學農藝學系本試驗以多年花生全年種植區（Ａ區），多年花生與田菁輪作區（Ｂ區），田菁與多年花生輪作區（Ｃ區），及一、二期作多年花生，冬季種油菜區（Ｄ區）等四區，調查各處理區生長量之差異，並與栽培達一年或三年的多年花生生長情形進行比較，其結果摘要如下：

1. 一、二期作均種多年花生區（A、D 區），七月和十月之單位面積地上部鮮重分別為 447.5 g/m^2、407.5 g/m^2。第一期種多年花生，第二期種田菁之輪作區（Ｂ區），單位面積地上部鮮重為 1660 g/m^2，而第一期作為田菁，第二期作為多年花生之輪作區（Ｃ區），單位面積地上部鮮重則高達 7210 g/m^2。
2. 由單位面積多年花生結莢數觀之，本年度試驗之當年生多年花生，生長期均不到一年，故植株生長較為緩慢，莖數少而莖長亦較短，故其結莢數自然較少，每平方公尺平均僅 4～7 個。
3. 多年花生生長若經過 1～3 年以上，經每次調查其單位面積地上部鮮重平均可達 1343.3~1810 g/m^2，平均莖數為 151.2~209.5 支/m^2，而單位面積結莢數，一年生的多年花生平均約為 19.6 個/m^2，三年生平均則為 46.5 個/m^2，均顯著較當年生多年花生為多。
4. 多年花生種子，其休眠性很長，至少可能需一個月以上。休眠期的長短，尚需進一步探討。

關鍵詞：多年生花生、田菁、油菜、生物質

Studies on the Utilization for Green Manure in Perennial Peanut (*Arachis pintoi*)

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Abstract: Sustainable agriculture was aim to provide a great deal of information, such as a balance between crop production and enviromental stress, and to maintain the successive crop production. The perennial peanut, "Amarillo", one of legumes for improving soil in Australia, have been studied five years in Agriculture Experiment Station in National Taiwan University. The result have shown that the perennial peanut have a great potential as a green manure and as a cover crop in landscape in Taiwan. It is very important to establish a adaptable cultivation under different enviroment condition with weed control and nutrient management in near future.Preminary results were summarized as follows:

1. The fresh weight. number of branch and pod were low in perennial peanut within one year cultivation.
2. It is difficult to use seeds of perennial peanut to propagate.
3. Perennial peanut is recommended for green manure or cover crop in long term crops or fallow land.

Key words： perennial peanut 、sesbania 、rape 、biomass